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Serial No. 09/914,294
December 4, 2008

AMENDMENTS TO THE CLAIMS:

The following listing of claims supersedes all prior versions and listings of claims in this application:

1. (Currently Amended) A computer-implemented method of generating a bill image in a computer-implemented billing system, the billing system being configured to generate bills relating to the use of a telecommunication network, the method comprising using at least one computer with accessible input/output and at least one data store to perform the following steps:

assigning a charge type identifier (CTI) to each of a number of usage records in said at least one data store; and

processing each usage record in dependence on its assigned CTI to produce [[a]] an electronic bill image[[, the]] in said at least one data store having a format of the bill image being that is dependent on the CTIs of the usage records.

2. (Currently Amended) A method according to claim 1 in which a CTI is assigned to each usage record in accordance with a set of rules being executed by said at least one computer.

3. (Currently Amended) A method according to claim 1, in which the computer-implemented processing of each usage record includes assigning a unique sort key to the usage record in said at least one data store in dependence on its CTI for defining the relative position of the usage record in the bill image in said at least one data store.

4. (Previously Presented) A method according to claim 2, in which the sort key is generated in dependence on the CTI and a number of fields associated with the usage record.

5. (Currently Amended) A method according to claim 3, in which the sort key is generated in accordance with a set of rules being executed by said at least one computer.

6. (Previously Presented) A method according to claim 3, in which the usage records are subsequently sorted according to their respective sort keys to create a sorted list.

7. (Previously Presented) A method according to claim 6, in which the sorted list is processed to generate, when appropriate, and in dependence on the CTIs of the usage records, a number of text inserts to precede or follow a usage record or group of usage records in the bill image.

8. (Currently Amended) A method according to claim 7, in which each CTI is associated with a position in a text map in said at least one data store, in which a change in position in the text map triggers the generation of a text insert, and in which generating the text inserts comprises:

determining the text map position for a usage records CTI,
comparing the position with that determined for the previous usage record, and
inserting an appropriate text insert if a change in position in the text map occurs.

9. (Currently Amended) A method according to claim 8, in which the text map is a tree in said at least one data store hierarchically defining the order in which text inserts are to appear in the bill image.

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10. (Previously Presented) A method according to claim 9, in which the text map position for each CTI is a leaf node in the tree.

11. (Previously Presented) A method according to claim 9, in which each branch between a parent node and a child node in the tree represents text to be inserted in the bill image.

12. (Previously Presented) A method according to claim 1, including generating a bill image record in the bill image for a number of the usage records, the format and content of each bill image record being dependent on the CTI of the respective usage record or usage records.

13. (Previously Presented) A method according to claim 12, in which a bill image record is generated for a plurality of usage records having a common CTI.

14. (Previously Presented) A method according to claim 1, in which a number of hidden records are generated in the bill image, the hidden records containing data used to create the bill image.

15. (Previously Presented) A method according to claim 14, in which the data contained in the hidden records enables the disassembly, modification and reassembly of the bill image to create a fresh bill image.

16. (Previously Presented) A method according to claim 1, further comprising:
generating a time line over at least a part of which a discount scheme applies,
dividing the time line into a number of segments each of which corresponds to a period during which a respective version of the discount scheme was operative,
accumulating charges from usage records for calls made during each segment,
calculating an appropriate discount from each of the accumulated charges,
generating a usage record for each discount, and
subsequently assigning a CTI to each of the generated usage records to create a number of discount usage records.

17. (Previously Presented) A method according to claim 16, in which call usage records are accumulated by call type, the call type being obtained for the call usage records from a mapping of CTI to call type.

18. (Previously Presented) A memory having a data structure stored therein, the data structure defining an electronic bill image having a number of records, each record having an assigned charge type identifier, in which the format of the bill image is dependent on the charge type identifiers of the respective records, the bill image being created in accordance with the method of claim 1.

19. (Previously Presented) A computer implemented billing system including at least one computer readable memory storing computer executable instructions for performing the method of claim 1.

20. (Previously Presented) A system according to claim 19, including a computer readable memory storing a set of rules used to assign a CTI to a usage record.

21. (Previously Presented) A system according to claim 19, including a computer readable memory storing a set of rules used to generate a sort key for a usage record.

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22. (Currently Amended) A computer-implemented billing system including at least one computer accessible to input/output and at least one data store for generating bills relating to ~~[[the]]~~ use of a telecommunications network, said system being arranged to perform the following operations:

automatically assign a charge type identifier (CTI) to each of a number of usage records; and~~[[,]]~~

automatically process each usage record in dependence on its assigned CTI to produce ~~[[a]]~~ an electronic bill image~~[[, the]]~~ having a format of the bill image being that is dependent on the CTIs of the usage records.

23. (New) A method as in claim 1, further comprising:
displaying said electronic bill image for visual viewing.

24. (New) A method as in claim 1, further comprising:
printing a legible tangible bill in accordance with said electronic bill image.

25. (New) A system as in claim 22, further comprising:
a display displaying said electronic bill image for visual viewing.

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26. (New) A system as in claim 22, further comprising:
a printer for outputting a legible tangible bill in accordance with said electronic
bill image.